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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,619	08/01/2001	Christian Criegee	P 281519 / 000319 OC	2502
909	7590	11/19/2003	EXAMINER	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			GRAY, JILL M	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)		
	09/919,619		CRIGEE ET AL.		
	Examiner		Art Unit		
Jill M. Gray		1774			

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 20 June 2003.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-9 and 11-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haller et al, 1,886,480 (Haller) in view of "Flame Retardant Cellulose", Sello et al, (hereinafter Sello) for reasons of record.

Haller teaches the formation of cellulose derivatives by treating cellulose that has been brought into a reactive form, such as alkali cellulose with a cyanuric halide having a similar chemical backbone structure as contemplated by applicants in claims 1 and 9. See page 1, lines 8-23. In addition, Haller teaches that the cellulose is cotton and can be in the form of a yarn as required by claims 3 and 11. Regarding claims 2, 4-9, and 12-13, because Haller teaches the same chemical backbone structure, it is the examiner's position that all derivatives thereof would have been obvious to one of ordinary skill in the art at the time the invention was made. In addition, Haller teaches treating the cellulose under alkaline conditions and treating with a cyanuric chloride derivative as required by claim 1. As to the degree of substitution, it is the examiner's position that where the general conditions of a claim are disclosed in the art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Haller is silent as to the incorporation of a phosphorus-containing compound.

Sello teaches flame retardant cellulose comprising triazine derivatives having the same chemical backbone structure as Haller and applicants' said triazine derivative being modified with a phosphorus-containing compound.

Treating cellulose fibers with a cyanuric chloride is old and known in the art as seen by the teachings of Haller and Sello. Accordingly, it would have been obvious to the skilled artisan to form cellulose fibers treated with a cyanuric chloride derivative having the same chemical backbone structure as that contemplated by applicants. As to properties such as the LOI and flame retardancy, it is the examiner's position that since the cyanuric chloride has the same chemical backbone structure as applicants, properties such as the LOI and flame retardancy are inherent. Regarding claims 7 and 8, Sello teaches that triazine derivatives containing phosphonate substituents have been synthesized and evaluated as flame-retardants for cellulosic fabrics. It would have been obvious to modify the cyanuric chloride derivatives of Haller by including a phosphorus containing compound as taught by Sello, with, the reasonable expectation of providing end products having flame retardant properties.

Therefore, the combined teachings of Haller and Sello would have provided a suggestion for the cellulose fiber and method of making as claimed in the present claims.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheibli et al, 6,036,731 (Scheibli) in view of "Flame Retardant Cellulose", Sello et al, (Sello, as applied above).

Scheibli teaches cellulose fibers having amino-s-triazine compounds bound thereto, said compounds being of the type contemplated by applicants in claims 1, 2, and 9 (see column 4 and 5) wherein the cellulose is cotton or viscose fiber as required by claim 3. See column 13, lines 5-10. In addition, Scheibli teaches a method comprising treating the cellulose fibers under alkaline conditions and treating with a cyanuric chloride derivative. See column 15, lines 14-30. The compound is used in amounts within applicants' ranges as set forth in claims 4-6, 12-13, and 15. See column 14, lines 62-65 and column 16, lines 1-4. The fiber can be in the form of a yarn as required by claims 3 and 11. Note column 13, line 14. Regarding claims 16 and 17, Scheibli teaches cellulosic fibers treated with a cyanuric chloride compound of the same type set forth by applicants. Accordingly, all properties including flame retardancy and LOI are inherent. As to the degree of substitution, it is the examiner's position that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Regarding claims 7-8 and 14, Scheibli is silent as to the inclusion of a phosphorus-containing compound. Sello is as set forth above and teaches flame retardant cellulose comprising triazine derivatives containing phosphonate substituents, wherein the triazine derivatives have the same chemical backbone structure as that taught by applicants and Scheibli. It would have been obvious to modify the compounds of Scheibli by including a phosphorus containing compound as taught by Sello, with the reasonable expectation of obtaining cellulosic materials having flame retardant properties.

Therefore, the combined teachings of Scheibli and Sello would have provided a suggestion to the skilled artisan for the cellulose fiber and method of making as claimed in the present claims.

Response to Arguments

Applicant's arguments filed June 20, 2003 have been fully considered but they are not persuasive.

Applicants argue that mere cyanuric chloride treated cellulose does not have inherent flame retardant properties as alleged by the examiner, further arguing that there is no motivation in Haller to flame proof cellulose by reaction with cyanuric chloride and that Haller reacts cellulose with cyanuric chloride to create an intermediate for dyeing cellulose and therefore, one of ordinary skill in the art would not conduct routine experimentation on the compounds of Haller to obtain amino-s-triazine treated cellulose with flameproofing characteristics as claimed in claims 1-8 of the present invention.

In this concern, it is the examiner's position that there is no clear factual evidence of record substantiating applicants' allegations that mere cyanuric chloride does not have inherent flame retardant properties. The compound taught by Haller is substantially similar to that contemplated by applicants and it is the position of the examiner that the same compound necessarily has the same properties. The discovery of a new use or properties in an otherwise known compound is not construed to be a matter of invention. As to the usage of cyanuric chloride as an intermediate, it is noted

that R⁶ in applicants' claim 9 is a dye group. Hence, it would appear that applicants' claim 9 sets forth a cyanuric chloride as an intermediate for dyeing cellulose.

Applicants argue that the examiner is incorrect in the assumption that the compounds of Sello have the same backbone structure as Haller and that not only would the combination of Haller with Sello not result in the present invention, but one of ordinary skill in the art would not seek to substitute an -O-CH₂-N- linker with an -O- linker.

In this regard, it is the examiner's position that the question in a rejection for obviousness on a combination of references is what the secondary reference would teach one skilled in the art and not whether its structure could be bodily substituted in the basic reference structure. *In re Richman*, 165 USPQ 509 (CCPA 1970). Accordingly, Sello is relied upon for all that he would have reasonably imparted to one of ordinary skill in the art at the time the invention was made, namely, that the addition of phosphorus compounds to triazine derivatives is known in the art in the production of flame retardant cellulose articles.

Applicants argue that there is no motivation in Scheibli to flameproof cellulose, further arguing that Scheibli describes cross-linking fiber materials to impart permanent finishing effect on them and that one of ordinary skill in the art would not conduct routine experimentation on the compounds of Scheibli to obtain treated cellulose with flameproof characteristics and that Scheibli add flame retardants to his fiber materials, clearly indicating that his cellulosic materials are not flameproof.

In this concern there is no factual evidence of record that the compound of Scheibli does not have some degree of flame retardant properties. The compound of Scheibli is substantially similar to that contemplated by applicants and it is the examiner's position that the same compound necessarily has the same properties. That Scheibli adds flame retardant materials to his fiber materials does not provide evidence that his compounds do not result in cellulosic articles having some degree of flame retardancy.

Applicants argue that one of ordinary skill in the art would not seek to substitute an -O-CH₂-N- linker of Sello with an -O- linker of Scheibli.

As set forth previously, it is the examiner's position that the question in a rejection for obviousness on a combination of references is what the secondary reference would teach one skilled in the art and not whether its structure could be bodily substituted in the basic reference structure. *In re Richman*, 165 USPQ 509 (CCPA 1970). Accordingly, Sello is relied upon for all that he would have reasonably imparted to one of ordinary skill in the art at the time the invention was made, namely, that the addition of phosphorus compounds to triazine derivatives is known in the art in the production of flame retardant cellulose articles.

Therefore, when considered as a whole, the examiner's position remains that the combined teachings of Haller and Sello and Scheibli and Sello would have rendered obvious the invention as claimed in the present claims.

No claims are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 703.308.2381. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703.308.0449. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0651.

Jill M. Gray
Examiner
Art Unit 1774



CYNTHIA H. KELLY
SUPERVISOR
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